AVICULTURAL MAGAZINE

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Green-winged King Parrakeets.

AVICULTURAL MAGAZINE

THE JOURNAL OF THE AVICULTURAL SOCIETY
AND THE AVICULTURAL SOCIETY OF AMERICA

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GREEN-WINGED KING PARRAKEET

Alisterus chloropterus chloropterus (Ramsay)

By A. A. PRESTWICH (Southgate, England)

DISTRIBUTION

South-eastern New Guinea west to the Sattelberg on the north and to the Arao River on the south (Peters).

NARRATIVE

On 30th September, 1878, E. P. Ramsay, Curator of the Australian Museum, Sydney, read a paper "Contributions to the Zoology of New Guinea" before the Linnean Society of New South Wales. Under the name *Aprosmictus chloropterus* he described as new a species obtained by Kendal Broadbent in the mountain district, near the Goldie River, about forty miles from Port Moresby.

Then on 20th March, 1879, R. Bowdler Sharpe (1879) read a paper "Contributions to the Ornithology of New Guinea" before the Linnean Society. He described a new parrakeet and named it *Aprosmictus broadbenti* after the collector. Very shortly after he received a copy of Ramsay's paper and consequently his specific name had to be suppressed. Bowdler Sharpe was justifiably annoyed because Broadbent's collection had been purchased by the British Museum with a distinct understanding that it was a direct consignment to England, and that no portion of it had been distributed elsewhere. But obviously the novelties described by Ramsay were the result of Broadbent's exertions. As Bowdler Sharpe (1879*a*) wrote: "It is very much to be regretted that a new species cannot come from such an out-of-the-way place as South-eastern New Guinea without being burdened at once with useless synonyms."

IN CAPTIVITY

Little further, apart from occasional references to specimens at

Tring, was heard of this parrakeet until 18th January, 1909, when the Zoological Society of London purchased three *Aprosmictus chloropterus*. These were, of course, listed as new to the Collection. Seth-Smith (1926) tells us that they were brought by Walter Goodfellow and that they lived for several years in the Regent's Park Gardens.

When, on 19th November, 1925, Walter Goodfellow arrived in London from a collecting expedition to New Guinea, he brought with him many superb birds. There was a single Green-winged King, said to be the first living example to reach Europe—this bird went to Foxwarren Park and nothing further is known about it. One rather wonders why Goodfellow did not remember, or professed not to remember, his importation of some seventeen years previous : also why no one else appears to have recalled the fact.

Then, in July, 1933, F. W. Shaw Mayer brought back five. Three of these went to Primley Hill and two to Foxwarren Park. Mr. Ezra's birds were believed to be a pair but the " hen " eventually turned out to be a cock. The elder bird died in 1936 and the younger in 1953. Kenneth Smith kindly informs me that one of the Primley birds is still alive.

Shaw Mayer brought two birds in 1936 that went to Foxwarren Park, and six in 1937 for the late Duke of Bedford. The former are the late Mr. Ezra's famous breeding pair about which more anon. The Duke's birds were an adult cock and five immature birds—four of these moulted out cocks. The following year the sixth, mated to the adult cock, showed some interest in her nest but got no further, probably because the cock was not as much in breeding condition as he might have been.

In 1945, after more than nine years, Mr. Ezra's pair went to nest and succeeded in rearing a young one. In answer to my inquiry, A. P. Shearing, the Curator of Birds at Foxwarren Park, kindly informed me that the following results had been obtained :—

1945, one young reared.
1951, one young reared.
1953, one young reared.
1954, two young reared.
1955, one young reared.

All six young are still alive. The 1945 bird is a male and is paired to the 1951 female, but they have not made any attempt to nest. When the late Mr. Ezra's collection was dispersed in November, 1955, all eight were secured by Sir Crawford McCullagh, Bart., and went to his aviaries at Belfast Lough, Northern Ireland.

The only other successes are to the credit of the London Zoo : 1949, one ; 1952, one, died from concussion soon after leaving the

nest ; 1953, one hatched but disappeared when well-feathered ; 1954, one reared ; 1955, two reared. This breeding pair was purchased in May, 1945, from J. Spedan Lewis, and had, I believe, originally been in the possession of the Duke of Bedford.

In 1949 E. N. T. Vane bred hybrids, Green-winged King × King Parrakeet (*Alisterus scapularis scapularis*), one reared of two hatched. In 1950 they were double-brooded ; two reared in the first nest and two in the second—one of the latter, however, soon died as the result of injuries to feet and beak sustained in an attack by a pair of Amazons in an adjoining flight. The male parent originated from the Duke of Bedford. Several of these hybrids are still alive—two with Sir Crawford McCullagh, Bart., and one with Mrs. G. T. Clark.

The Duke of Bedford (1929) suggests that one reason this magnificent parrakeet is so rare in aviculture is " the fact that native trappers stupidly mistake it for a Lory and allow it no seed or grain, with the result that it quickly dies of malnutrition ".

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Additional note.—1956, Sir Crawford McCullagh, two reared ; London Zoo, two reared.

A. A. P.

* * *

TANAGERS OF THE WESTERN U.S.A.

By NICHOLAS GRAVEM, JR. (Mill Valley, California, U.S.A.)

I read with great interest Mr. D. M. Reid-Henry's article (AVICULTURAL MAGAZINE, Vol. 62, No. 3) differentiating between the two Scarlet Tanagers : *Piranga erythromelas* of eastern North America and *Ramphocelus brasilius* of eastern South America.

I fear that the author is not entirely correct in assuming that the majority of American aviculturists well understand this situation ; however (and fortunately), there should be no confusion in the minds of those who have now read his concise explanation. It seems that none of the more popular non-technical books on the subject treat this distinction between the two Scarlet Tanagers, and generally omit entirely our North American bird. Probably the prevalence, as aviary

birds, of *Ramphocelus brasilius* is due to the strict protection enjoyed by our northern Scarlet Tanager ; the few of the latter reaching Europe probably being trapped south of our border.

We have, over here, several others of the Family Thraupidæ that I believe are little known as aviary birds in Britain, or elsewhere, for that matter. Like *P. erythromelas*, they are strictly protected (and from American aviculturists, generally speaking, as well). We have no scheme with regard to keeping close-rung native birds, as in Great Britain, but governmental permit may in some cases be obtained.

A member of this family that I personally believe vies with the beauty of the Scarlet is our Western Tanager (*P. ludoviciana*). This bird is basically yellow with a crimson face ; black back, wings, and tail ; yellow wing-bars ; lighter grey bill and darker grey feet. It is slightly smaller than our Scarlet. Adult hens are greenish-yellow above and drab yellow below. This attractive Tanager is generally found in our more mountainous regions, except during its spring and autumn migration when it occurs throughout the lowlands. It has been accused by orchardists of damaging fruit, particularly cherries, and sometimes goes by the name of " Fruit-eating Finch ". Their nesting habits are similar to those of the Scarlet ; a rather loose nest on a horizontal limb, and three to five bluish eggs spotted with light reddish-brown.

The Cooper's Summer Tanager (*P. rubra cooperi*), another bird of the western U.S.A., is predominantly red ; not the vivid scarlet as in *P. erythromelas* and *Ramphocelus brasilius*, but more of a rose-red. However, this rose-red extends over the entire plumage with the exception of the wings which appear to be somewhat washed with brown. Hens, as can be expected, are drab olive-yellow. Unlike the Western Tanager, the Cooper's prefers the willows of the river-bottoms and is quite abundant along our Colorado River during spring and summer.

A bird very similar to the above is the Hepatic Tanager (*P. flava hepatica*), but, as the name suggests, it is of a darker shade of red, particularly on the back. It also has a brownish ear-patch and quite dark bill ; otherwise very similar to *P. rubra cooperi*. This Tanager is at home in the higher forests.

I am sure these three species would be admirable aviary inmates, and it is unfortunate that they are not available to aviculturists. The same sentiments apply to a host of other birds native to western U.S.A. For example, in his excellent book *Foreign Bird Keeping*, Mr. Boosey praises the merits of our Rose-breasted Grosbeak of the east. This brings to mind our western U.S.A. counterpart of the Rose-breasted, the Black-headed Grosbeak (*Zamelodia melanocephala*). In this bird the rose of the breast is replaced by cinnamon ; and it is

an equally fine songster. I particularly think of this handsome Grosbeak at this time of year because of its prevalence about our summerhouse. I am sure this bird would make a wonderful aviary subject.

American aviarists cannot, generally, keep native birds such as these ; but, fortunately, some of us live in neighbourhoods where it is possible to observe them in nature. But, does this satisfy the desire to try to breed them in captivity under controlled conditions ?

* * *

BREEDING OF THE EVENING GROSBEAK

(*Hesperiphona vespertina*)

By C. M. Payne (Barford, Warwick, England)

Many years ago, prior to the last war, I was privileged to see exhibited at one of the many cage-bird shows, a pair of Evening Grosbeaks in excellent condition and simply glowing with health. They took first prize and, if I remember rightly, also the special prize for the best foreign hardbill. The memory stayed quite fresh with me, despite the upheaval of the war and the passage of time which none can avoid, and I was therefore particularly overjoyed when, during 1954, two pairs were presented to me by a very good friend. As they arrived in the autumn I put the birds into my bird room for the rest of that year. Early in 1955 the two hen birds died and this caused me much sorrow, primarily because I thought replacements would be difficult, but also because I hate to lose any bird. I cannot quite ignore my conscience, which reminds me from time to time that I have robbed a living jewel of its freedom and must therefore give it the very best service I can. However, at about that time, my friend Raymond Sawyer had an odd hen which he gladly exchanged for one of my remaining cocks. This was a propitious exchange because during the present season this hen has nested and produced two young Grosbeaks which are now, at the time of writing, self-supporting. Here is the story of probably the first successful breeding of the Evening Grosbeak in this country.

The pair of Evening Grosbeaks were housed in an outside aviary, about 15 feet square, with a shelter of reasonable size attached. This aviary contains the remains of a large apple tree and other shrubs, in particular *Lonicera nitida*, a very useful evergreen shrub, which is liked by many birds for nesting purposes. I did not anticipate that the Evening Grosbeaks would take to this shrub, as all the authorities which I could consult made it plain that in the wild state Evening Grosbeaks nest in the very tops of tall trees, and in any event not less than 20 feet from the ground. How many aviculturists can

offer that height? However, I am a firm believer that if one can only get the birds into a super-fit condition they will attempt to breed and will accustom themselves to strange surroundings.

About this time a pair of Wattled Starlings were busy constructing a bulky nest in a box bush; or rather they were constructing and demolishing their bulky nest in alternate weeks. I was rather anticipating that the Starlings would be the first to lay, but one day during the tour of inspection of the aviaries I saw the hen Grosbeak extract a twig from the Starlings' nest and fly swiftly about the aviary with it in her beak. I watched intently hoping that I should find a partly constructed nest in some part of the aviary; but the bird did not deposit the twig in any spot, she merely allowed it, in due course, to fall to the ground where it was instantly seized by the Starlings, who once again added it to their nest. By the way, Wattled Starlings take the place of scavengers, and add every particle of green food and discarded stalks to their nest, in fact they spring-clean the aviary each and every day. For some days I watched the hen Grosbeak repeat the performance with a bent or twig, but no attempt was made to make a nest. I then searched the garden for an old Blackbird's nest which I placed, for want of a better place, in a *Lonicera nitida* bush about 15 inches from the ground. I intended later to construct a wire-netting shelf camouflaged with brush-wood in the highest part of the aviary, but almost before my back was turned the hen Grosbeak had inspected the nest and, apparently deciding that here was the answer to her housing problem, added a bent or two and next day laid an egg, which was followed by three others on consecutive days. The eggs were similar to the eggs of a Greenfinch although much larger, a pale clear ground with minute spots on the larger end. I did not actually measure the eggs for fear of disturbing the birds. The hen sat steadily after the first egg, and after twelve days the first young was seen, followed by three others on consecutive days. The last youngster was of course much smaller than the other three and was soon lost. The three survivors grew well on the mealworms and gentles which were (after passing through a thorough mastication) liberally fed by the hen.

For the first few days no other food was fed so far as I could tell. Later, as the young birds grew, a quantity of hemp in particular, together with sunflower, soaked oats, and mixed seeds were taken and also a little sweet apple and groundsel. The old Blackbird's nest was hard put to it to contain the youngsters as they grew, and as they grew so did my fears that the youngsters would be precipitously discharged on to the ground, so preventive methods of propping the nest were resorted to. This proved quite successful and the nest held. On the 20th day of July, just eighteen days after hatching, the first young Evening Grosbeak left the parental home.

The Evening Grosbeak is one of the largest of the sparrows, with a

large typical grosbeak bill. In size it is somewhat smaller than the English Hawfinch. It is covered in broad masses of lemon yellow, with black wings, tail and crown, the secondaries and tertiaries are largely white. The cock has a bright yellow bar on the forehead. The female Evening Grosbeak is much duller with no bright yellow on the forehead, and with an ashy wash all over ; the secondaries and tertiaries are not wholly white as in the cock, but broken.

These birds are found in Central and Western North America, where they breed in the northern coniferous forests from Western Ontario, westward, and along the mountains to New Mexico. In winter they migrate south. The nest is made of small twigs and lined with bark, hair, and rootlets. As the favourite food of the Evening Grosbeak in North America is the seed of the Manitoba maple, left hanging on the trees, it is considered to do little harm to agriculture and in fact may do quite a bit of good. It is also extremely fond of the seeds from old rotten apples which are also left hanging on the trees through the winter.

The three young birds which left the nest were, I believe, two cocks and one hen. The one hen had a rather crippled foot and was from the first unable to perch properly, whereas the other two were both strong on the wing and were able to perch without difficulty. A few days after leaving the nest, my aviary attendant, Mr. Beck, found the crippled bird dead and we were left with the two young cocks. They continued to prosper and after four weeks were seen to be eating both the soaked and hard seeds. It is interesting to note that as soon as they became self-supporting, gentles and mealworms were ignored, although they did take a little fruit.

The birds on leaving the nest were coloured like the hen, but the two young fully reared have wings like the cock ; hence the supposition that they are young cock birds. In fact one, the elder, already has a patch or two of lemon yellow on the sides and thighs.

A surprising fact was the absolute tameness both in the nest and since flying, quite unlike the nervousness shown by similar British finches.

During the courtship the hen bird, as I have already stated, carried twigs and bents about the aviary followed closely by the cock bird, with crest erect and wings down. Mating was not witnessed. The cock bird took little interest in the nest although a few quiet sibilant chirrupings were given if one approached the nest too closely. He did not share the incubation, which was solely the responsibility of the hen, as in fact was the rearing. The cock only fed the hen on occasions with a morsel of chewed up mealworm.

The old birds are not aggressive in any way and the family are living at peace with the other occupants of the aviary. The Starlings before referred to, a pair of Barraband's Parakeets, an odd Plum-head cock bird, and three Red-faced Lovebirds.

As described, C. M. Payne has bred the Evening Grosbeak (*Hesperiphona vespertina*). It is believed that this may be a first success. Any member or reader knowing of a previous breeding of this species in Great Britain or Northern Ireland is requested to communicate at once with the Hon. Secretary.

* * *

A FEW REFLECTIONS ON BIRDS' WAYS AND NATURES

By E. B. TANNER (Finchley, London, England)
(Formerly Overseer of Birds, London Zoo)

When considering ways of keeping small birds (or large ones, and mammals, too), I do think it helps to include a certain amount of psychology in one's calculations. Not, of course, the kind of psychology we hear so much about these days in its application to the human miscreant, which is really anything but psychology. I mean an attempt to see things as far as possible through the eyes and senses of the bird with its instinct gained by age-old experience, and to identify oneself with it. Perhaps I shall not be very successful in trying to explain this point of view, but I will do my best. There are, of course, many opinions as to the methods to adopt in keeping birds at their best, and quite a number of them are correct, judging by their owner's experience, with regard to condition and longevity. Others, again, seem to flourish although there really seems to be no reason why they should, under well-meant but misdirected management; for instance, a parrot which had helped itself at will from a box of liqueur chocolates over a period of years. Perhaps, however, such instances are on a par with the long-lived Okapi at the London Zoo. The late Mr. R. I. Pocock, in conversation ascribed its longevity to the fact that probably its digestive organs had undergone a transformation enabling it to thrive for a long time on the very different diet it was able to receive here, compared with its natural one. However, it would be very risky deliberately to try out such an experiment on small birds without a fatality occurring, and one can only look upon these unusual instances as fortunate accidents. One parallel can be seen though amongst birds which are normally rather difficult, as one occasionally has one which breaks all records for longevity for such a species, although treated no differently to the others. Reverting to the question of birds' welfare in general—suppose we take the vexed question of heating. At times I have been told about very small birds, Cordon-bleus, for instance, hopping about in the snow, very well and happy, although I have not received subsequent information. If one considers, though, how near these

small birds, compared to larger ones, have their vital organs to the surface, it would seem that these examples must be lucky survivors. Large birds, of course, from whatever part of the world they come, especially if thickly feathered, such as touracous and pigeons, are usually much more able to withstand hard weather, but even they have years added to their lives if they are supplied with some comfort. By heat I do not mean what is known as coddling, 85 or 90 degrees, although this can be very useful in cases of illness, providing one takes care gradually to accustom the birds to a lower temperature afterwards. I suggest a moderate heat, such as one in which one could sit and read in comfort without extra clothing. Feathers are excellent non-conductors of heat, but they are not very thick on a small bird, and too often we forget that it cannot don extra clothing such as pullovers and overcoats, as we can. I have often heard people, wrapped up to the eyes, entering the Bird House on a cold day remark upon the heat. They, of course, forget that they are dressed to suit the outside temperature, and that it is the contrast which they feel, but that the birds are in the same covering the whole twenty-four hours. We know many wild birds, apart from tropical forms, have to encounter extreme cold at times, but that is a period in which they are at a low ebb, and not the time of boundless health and procreation which follows with the fine weather. Necessary as it is in a virgin country, for which Nature's scheme was evolved, we hardly want our individual birds to be subjected to rigours to reduce their surplus numbers, and therefore I suggest that attempts to harden them unduly can only lead to increased fatalities. They may withstand spartan treatment for quite a time, but there always comes a day when, for some reason, they are below par and then, in common parlance, " they have had it." There is no possibility of saving them. It is strange the effect a sharp frost will have upon many small birds, even in a heated room. When one can sense a frost outside, without actually feeling cold, it would seem that this can be enough to cause chill in the abdomen, one of the birds' worst enemies. I have noticed many cases of enteritis after such a period. Indeed, I think the greater proportion of enteritis cases are due to cold upsetting the digestive organs, rather than a food poisoning. We know the effect of chill upon us, so how much more likely it is to upset a small creature which is so allergic to the smell of paint or to fumes of any kind. I would stress again that I mean a comfortable warmth, say 65 degrees, for small birds, especially at night when they are still, not a hot-house temperature all the time.

It is always rather unaccountable to me, why a given temperature seems so much warmer in a small compartment than in a large one. Maybe absence of moving air in the smaller place accounts for it, but I should certainly plump for a higher temperature, rather than

a lower in a large compartment, to obtain the same result. In Nature, we know, nothing approaches or grasps a bird except with evil intent, and we can hardly expect it to accept us, not knowing our intentions, against all its deeply inherited and justified instincts. That is why a strange bird is not stupid when it dashes about so madly upon a person's approach. It is not terribly worried either, but just following its natural instinct to get away from a possible danger. If one can observe it unseen, a difficult thing to do on account of its acute eyesight, it will usually be found that it ceases its frantic endeavours. At the same time, it may still do its utmost to get out, not because it is frantically beating its wings against its prison bars, as some well meaning people will have it. It does not realize such a thing as a cage, but is trying to get through the vegetation, as it appears to it. There is hardly such a thing as an impenetrable bush to the wild creatures—on the contrary, the dense vegetation is often their salvation, as it receives them and ensures their escape. So the wires to the bird appear like a bush it cannot get through, and its main idea is to take no chances. This escape into dense bush habit is inherent in many mammals such as antelopes, and also struthious birds. If allowed into a new paddock without previous preparation, it sometimes happens that they dash headlong into the opposite fence expecting to go through it, with serious injuries, if not worse, resulting. To return to the bird—in a cage, of course, the distance is too short for sufficient speed to be attained to do much harm, although abrasions on the face may be caused. If a bird is very wild, it may be necessary to have hessian fixed temporarily, where it mainly concentrates, or even to have a cage with wooden bars, merely temporarily of course, which are less damaging than wires. There is, however, a much greater risk when releasing the bird into a strange aviary, or for the first time, on account of the speed attained. It is therefore advisable to place the cage inside the shelter of the aviary for a few days, in order that it can get acquainted with the sight of the other denizens (and they with it) and with its surroundings. Then if its cage door is left open, it will come out quietly. This acquaintance will also help to prevent the other birds ganging up on a total stranger. There is another angle to this, many insectivorous birds after being in a cage where they feel at home and safe take it badly upon being released, and will mope in a corner, with perhaps fatal results if left too long. Shamas come to my mind as being very prone to this, which can be avoided by the method mentioned.

Apropos of a bird's acute eyesight, already referred to, I think T. H. White, in his book *The Goshawk*, summed it up admirably. While trying to stalk his bird, which had got away, he said he noticed one thing about the birds he encountered, especially crows, hawks, and rooks, and that was if you saw a bird you could be sure

it had seen you first. Another instance of their keen vision is seen in a small bird nesting in a hedge. Although a long hedge of dense vegetation looks just the same to one throughout its length, it will fly headlong and parallel to it, before unerringly plunging into the small gap leading to its nest. To revert to the Shama. If one looks at it from its point—it is in a home, where it feels safe, and where food and water are at hand. It is suddenly turned into a large hostile (to it) area, with perhaps other hostile occupants, does not know where food and water are, and is too dejected to search. It gets into what it feels is a quiet spot and lies low, consequently suffers from strangeness and exposure if left, and can starve in the midst of plenty. The remedy is to accustom it first. It often becomes necessary to catch a bird from an aviary for some reason. One has to use a net, upsetting all the other inmates and perhaps causing injuries to them by collisions with the wire. As we have already discussed the aversion a bird has to being caught, I would suggest the following. Suppose we put a trap cage, with a string to close the door as it becomes necessary, installed as a permanent feature of the aviary, and put the food tins inside always. As they would all go in and out freely, the bird wanted could be caught with the minimum of disturbance, as it would then only be necessary to take it out of the cage. This would aid in inspiring trust in the other inmates, as birds have extraordinary memories for many things, especially those which involve fright or discomfort. I have not found that noise itself worries them to any extent. A sudden bang will make them jump, but they recover almost at once. It can be appreciated that a bird which stopped to brood over any sudden happening would soon fall a victim to a nearby predator. Of course, it is possible that a long-legged bird could slip and break its leg on a smooth surface in the same circumstances. The bombs during the war only scared the inmates of the Bird House temporarily ; one reason for this may be their familiarity with thunder, which can be terrifying, in tropical zones especially, though this does not seem to apply to some larger mammals, such as elephants. They, however, do not have the same need to recover quickly. As for ordinary noises, birds seem to like them to a certain extent, as they join in the din. I have often heard a bird which normally never sang, thoroughly enjoying itself when the House was full with a Bank Holiday crowd. I doubt whether noise interferes with breeding to any extent, if they are accustomed to it, but a sudden commotion when they are living in quiet surroundings is another matter, and is likely to cause abandonment of the nest. This is more unlikely if the young are hatched, even if unwise. Predatory birds being uncertain breeders, it was rather surprising that we bred Great Eagle-Owls at the Zoo on at least three occasions, with lorries thundering away a few yards off on the outside road ; this shows how a bird can

become used to ordinary noises. Of course, with predatory birds and some others, such as Blue Pies, there is always a chance that the parents will devour the young, whether kept in secluded surroundings or not, and I feel inclined to put this down to the parents craving for freshly caught food, particularly when they have young as they would be on the hunt incessantly. Naturally one would expect to find birds bred in quiet aviaries very much wilder than those used to plenty of movement. This applies to small birds in general, and one has a much greater certainty of taming them if they are kept where the owner or his family spend their time, rather than in a room where they only visit occasionally. In the same way, birds kept in a range of aviaries will be tamer and steadier if they can see a visitor approaching before he, to all intents and purposes, suddenly bursts through a hole in the wall. The latter causes a panic, all the birds making a frantic dash to get outside. A wire panelled door and another panel let in the dividing wall are indicated here.

Birds, mammals too, are extremely averse to any change of routine. Unlike us, they do not hanker after anything different, whether food, cage, or surroundings. I do not mean a sameness of diet, as naturally we try to give them as much variety as possible. But give them something new and they turn their "noses" up at it. I have known a large mixed aviary refuse to touch wasp grubs and other insects, merely because they were new. Yet they would go crazy over mealworms. Our fruit-eating birds would not entertain dates as a food. Then came the war, and for a time we were able to get war-damaged raisins and sultanas. This supply came to an end with the depletion of these damaged stocks, but fortunately damaged dates became available. These they absolutely refused to look at, until eventually, with no other alternative, they began to eat them. In time, again, other fruits became possible, when they, one and all, refused to eat anything but dates for some time. We almost always find an escaped bird strives might and main to get back into its cage or aviary if it happens accidentally to fly out of the door, that is unless it happens to lose itself behind trees or houses in the first headlong dash. I imagine that we, in a hostile world, would similarly prefer to remain where we felt safe and had food and shelter, remembering that the unknown does hold dangers for the bird, unlike us, for whom it merely spells adventure. In some instances it may happen that a bird does not recognize the external appearance of its cage, but if it does that is where it makes for. Amongst many instances of this I think one concerning a Common Partridge is interesting. A lock on an outside aviary door failed to catch and amongst Laughing Kingfishers, a Wandering Tree-Pie, etc., which all returned subsequently, the Partridge was wandering about on the path outside. I got one of the keepers to go round the other way to try to walk it back but, as luck

would have it, a child burst out of the door of the house just as it got near. Up it rocketed, over reservoirs, fences, and trees into Regent's Park. It was war-time, the Park was closed, and the grass a foot or more high. I had written it off, when three mornings afterwards a gardener found it waiting outside the aviary door. He opened the door and in went the Partridge, settling down quite happily. One can perhaps understand a passerine bird, upon taking stock of its position, flying to an adjacent point near its aviary, but for a ground bird, hiding in long grass, never flying except by necessity, it is certainly extraordinary that it should find its way back to a door opening in a lobby. It had to come back over high double fences and other obstacles.

But after all a bird at liberty has its sad moments as well as those when it is on top of the world. In northern climes there are exposure and starvation during winter besides enemies. These last are an enormous factor in the tropics, in fact, so many creatures prey on small birds that one can wonder how they maintain their numbers. I believe it has been estimated that the average life of our Robin is thirteen months. They have to be on the *qui vive* unceasingly from aloft and below, and only their capacity for quick recovery prevents life being a sorry business. Survival is not easy, but there can be no regrets on our part. It is Nature's way, and they are attuned to it, but we can understand how they appreciate the safety of a cage or aviary where food is at hand within a short time of accustoming themselves.

To revert to birds' dislike of change, how often can one see a bird hating to be put into a new cage. I have seen birds in cages so dilapidated that they were tied together with pieces of string, and when in sheer desperation a new cage was provided, the occupant moped for two or three weeks. New perches or feeding tins will have a similar effect, the occupant avoiding them as long as he possibly can. My own birds at home sometimes keep swearing until we have to find out what is the matter. It may be a newspaper which has got under a chair unseen by us and on its being restored to its proper place all is peace again. When I was a boy we had an ordinary Java Sparrow at home, but " he wasn't ordinary ". He was one of those birds who preferred a dilapidated cage held together by will power only, and refused to take to a new one for a long time. He was a really sweet singer, the only one I have ever heard which really sang nicely, and I have had hundreds under my care since. He was kept on a windowsill in my bedroom and it was usual to hear him having a bath at one or two o'clock in the morning in the dark, when one was just able to distinguish his cage in the window.

One example of a bird's extreme dislike to any alteration is, I think, shown by the following case of a British Reed Warbler in the Bird House. When it first arrived, thinking to give it a very faint imitation

of its natural surroundings, I put a twig in its cage, which had an offshoot at approximately right angles. This was fixed in its cage with the offshoot pointing upwards, the idea being that it could assume the same position as if it were clinging to an upright reed. After this twig had been in its cage for a long time, some two or three years, and had received repeated cleanings, it seemed to be time for it to have a new one. As an exact replica was not available, mainly the reason why it had the other one so long, and anyway it did not seem to matter a great deal (events proved me wrong), an ordinary twig was substituted. Upon this it immediately went off colour and sat in a corner all day with his eyes closed. It looked as if it were going to die, and I really think it would have done so. The next morning it looked worse, but an idea occurred to me—had the removal of his twig any connection with its loss of health? So we searched the rubbish for the old twig which, fortunately, for some unusual reason had not yet been removed. It was soon found, cleaned, and restored to its cage with the result that within half an hour it was its usual self again and there was no further sign of illness, either then or later. Undoubtedly his illness and recovery were due only to the removal and replacement of this important (to him) twig.

We sometimes wonder why a pair of birds kept together do not get on well, and perhaps one bullies the other—very often the bully is the hen, in Bullfinches, for instance, and Birds of Paradise. We can understand this better if we reflect how even a breeding pair of wild birds are seldom together, one or the other being a field or more away, a great deal of the time. No doubt a human married couple would have their differences if they were confined to one room all the time but, not having the primitive nature of the bird, they would do their best to arrange matters amicably, at least we hope they would. With our bird, on the other hand, obeying Nature's behest, it just attacks the object of its dislike all out. At liberty, of course, with all wild creatures tragedy is averted by the weaker ones, whether physically or in spirit, making good their escape. As our bird cannot do this, one or the other must be removed. It is no use to try keeping them together in the expectation that they will become used to one another. Even if the bully does not actually peck the other one and just drives it off the perch or feeding tin, it will take all the spirit out of it and you may find it dead, without any injury being inflicted, even in an aviary. In the same way in which we hear of a primitive native fading and dying because he has had a curse put upon him, so can a bird die at will, so to speak, if it is not perfectly happy. For this reason, there can be no cruelty involved in keeping birds in captivity, as long as they are fed and attended properly. If they bath, feed, sing, and keep their plumage in order, they are perfectly happy, besides living much longer. There are no two ways about

this, as if they are not happy they just fade and die for no other reason, just as a plant does if grown in uncongenial soil. A curious thing about birds (and doubtless mammals) is that if one dies for some reason you are quite aware of or for no reason at all, one can almost invariably find it has a complaint—which could have caused death, although it had shown no signs of such. The explanation for this, I take it, is that few birds, like us in that respect, are perfectly healthy. This drawback, however, does not prevent them living out their normal life if all else is well and it is a normal provision of Nature, especially in the tropics. In certain instances, also, it is possible for a bird which is known to be a young one beyond any shadow of doubt, to show every sign of senility when a post-mortem is undertaken after death.

Well, I have mentioned these things to try and show how temperamental our birds are, and in addition to knowledge of the proper care of them, which we can obtain from one of the many books written to give advice in bird-keeping, it helps a very great deal if we, as I said at first, try to identify ourselves with them and put ourselves in their place. Domestic livestock, whether mammal or bird, adapts itself to all sorts of artificial treatment but, with the wild birds especially, it helps enormously towards success if we pay regard to their necessarily highly strung constitutions and to the conditions when they are at their best, imitating nature at her kindliest mood as far as we can.

* * *

BREEDING OF THE SENEGAL COMBASSOU (*Hypochera chalybeata* Müll.) IN CAPTIVITY

By Holger Poulsen (Copenhagen, Denmark)

The Senegal Combassou is a very handsome and interesting little bird, but, nevertheless, it is not common in bird collections, at least not here in Denmark. This is obviously due to the general assumption that it does not breed in captivity, and that it disturbs other breeding birds. Little is known about the breeding biology of this bird, but it is strongly suspected of being parasitic. Below are given some examples from the literature of the subject. In his study of the breeding parasitism of the Viduinae Neunzig (1929) states that observations of parasitism in *Hypochera chalybeata* have not been made in the wild, and according to some aviculturists " brütet *Hypochera* nicht selbst ". Roberts (1949) writes about *Hypochera* : " . . . nests of this and other species have been described, but it is probably parasitic like other related species and genera. . . ." Hoesch (1939) points out that there is strong evidence that *Hypochera* is parasitic

as no records of nests exist, but on the other hand the fosterers are not known. Bannerman (1953) says about *Hypochera chalybeata*: "There has been much speculation as to whether or not the Senegal Combassou is parasitic on other species, especially on *Lagonosticta senegala*, the Fire Finch, but actual proof is not yet forthcoming." Chapin (1954) writes: "We still have much to learn about the combassous. Surely their eggs are always laid in the nests of *Lagonosticta*, *Estrilda*, and perhaps some allied members of that same group." The Morels (1955) are the only ornithologists who have made actual observations of the breeding habits of the Senegal Combassou. They write: " . . . nous avons jamais trouvé de nid d'*Hypochera*, ni jamais observé d'adultes en train de construire, bien que cette espèce soit très abondante dans notre region. Par contre, nous avons remarqué à plusieurs reprises que la femelle d'*Hypochera* visitait souvent les sites de nidification favoris des *Lagonosticta*. Nous avons enfin remarqué à plusieurs reprises la présence d'un jeune *Hypochera* parmi des groupes de jeunes *Lagonosticta* qui continuent à suivre leur parent mâle après la sortie au nid, cette jeune Veuve Combassou était alors nourrie par le *Lagonosticta* adulte, comme les jeune de cette espèce."

An indirect proof of the breeding parasitism of the Combassou is pointed out by Neunzig (1929). He found that the mouth markings of the nestling of the Combassou are very similar to those of the nestling of *Lagonosticta senegala*, and the juvenile plumage of the two species in question are also very similar to each other. This, he thinks, indicates an adaptation of the mouth markings and juvenile plumage in the Senegal Combassou to those of the foster-species. The Morels (1955) also mention the striking similarity of the palate markings in the nestlings of the two species.

Records of breeding in captivity are few. Russ (cited in Butler, 1899) says that he had a pair of Combassous where the hen laid eggs in the nest of a pair of Senegal Fire Finches which neither proceeded to egg laying nor brooding of the alien eggs. Later the hen Combassou restored an old Zebra Finch nest and laid five eggs, which were incubated by the female alone in twelve days, whilst the male defended the nest and pursued all other birds. Neunzig (1921) says that the Combassou has bred a few times in captivity, and that a pair used an old nest of a Zebra Finch which they repaired. Probably he refers to the same case of breeding as mentioned by Butler. Boyd (cited in Hopkinson, 1926) says that he had one young bird reared by Cordon-bleus (*Uraeginthus bengalus*), and that the Cordon-bleu female and the Combassou female both laid eggs in the same nest, but the latter took no further interest.

Therefore it may interest both aviculturists and ornithologists that we have had two breeding results in recent years. Two different

aviculturists were so lucky as each to have a pair of Senegal Combassous breeding in their aviaries. In the first case in 1951 a pair parasitized the Fire Finch (*Lagonosticta senegala*) (A. R. Nielsen, 1951) ; in the other case a pair built their own nest in the summer of 1955 (K. Nielsen, 1955).

In the first case a pair of Combassous were placed together with other small birds in an aviary (5 × 2.70 × 2.5 m.) planted with elder and spruce and grass on the ground. When the male got his brilliant plumage he made his courtship flight, hovering in front of the female, or over her, on flapping wings with his body feathers slightly ruffled, and twittering ; but it did the same to Bengalese and Indian Silverbills. The female showed interest in the nests of different birds and was seen on several occasions sitting in the nest of a pair of Senegal Fire Finches that had laid eggs, and which were not frightened by her presence. One day four eggs were found outside the nest, but the Fire Finch was still brooding. Some days later the luminous spots of the gape wattles of the young ones were seen in the nest when the pair had left the nest while feeding. They brought food for the nestlings, viz. fresh ants' pupæ, water-fleas, and sprouting seed and after some time two young ones left the nest. They resembled the Combassous, not the Fire Finches, and when they grew older they scratched with their feet with a shuffling motion when seeking for seeds on the ground. The Fire Finches cared for the two young Combassous for three weeks after they had left the nest. Then they stopped feeding them, and one of the young birds perished, whereas the other was independent and was doing well.

In the other case of Combassous breeding in captivity a pair was put in an aviary (4 × 1.75 × 2 m.) together with other small birds, among them a single male Senegal Fire Finch and two males and a female Cordon-bleu. At the beginning of July the male Combassou was collecting nest material, viz. grass and coconut fibres. The nest was placed high up in the aviary in a thick shrubbery of twigs ; it was a loosely-constructed domed nest of the waxbill type with the entrance pointing obliquely downwards. It was not observed whether both mates shared the brooding duties, but it was noticed that both male and female were in the nest during the night. Both male and female took part in feeding the young in the nest ; the female always flew into the nest first, the male followed her, and he always appeared again first. Perhaps only the female fed the young and the male only fed the female.

At the beginning of August two young ones left the nest and were now exclusively fed by the male, who also guarded the young very intensively against other birds, which he pursued. The female no longer showed interest in them. The young sometimes gaped and

begged for food from other birds, such as Zebra Finches and Cordon-bleus, and now and then they succeeded in getting some. During the first days after the young had left the nest they still slept in it, together with their parents, during the night.

The observations made by the Morels and the first of the two breeding results in captivity actually show that the Combassou is parasitic. The second breeding record shows further that the Combassou is also able to build its own nest, but the problem still remains to be solved whether it regularly has two methods of breeding or only occasionally builds its own nest, e.g. under the abnormal conditions of captivity. At least, no records exist of nests of *Hypochera* in the wild, but the interesting fact has been established that nest-building, incubation, and rearing behaviour are not lacking in *Hypochera chalybeata*. Another question is if it regularly parasitizes on birds other than the Fire Finch. Neunzig (1929) has implied that each of the Viduinæ has its particular waxbill species host, but this is by no means definitely established. Thus, *Vidua macroura* is known to parasitize at least nine species of *Estrilda* and *Lagonosticta* and two weavers, *Coliuspasser ardens* and *Amauresthes fringilloides*, while there is some evidence that *Vidua regia* lays its eggs in the nest of a warbler, *Prinia flavicans* (Friedmann, 1950). Neunzig was well justified in his belief that the Fire Finch is the chief fosterer of *Hypochera chalybeata*, but other species besides the usual host may also play a part.

Three members of the Viduinæ are definitely known to be nest parasites. Thus, as already mentioned, the Pin-tailed Whydah (*Vidua macroura*) chiefly parasitizes Estrilda waxbills and their allies, the Paradise Whydah (*Vidua paradisæa*) parasitizes the Green-winged Pytilia (*Pytilia melba*) and other Pytilias, and the Shaft-tailed Whydah (*Vidua regia*), the Violet-eared Waxbill (*Granatina granatina*) and probably others. The other species of *Vidua* will presumably in time be found to be parasitic as well.

Neunzig (1929) pointed out the close similarity in palate markings and gape wattles between the nestlings of different whydahs and their hosts, and that the whydahs owe the possession of these ornaments wholly to mimicry of their fosterers. Delacour and Edmond Blanc (1934) are more cautious and assert that there is not enough evidence of this theory. Hoesch (1939) and Chapin (1954) disagree with Neunzig and take the more balanced view that the whydahs are closely related to the Estrildinæ, and that their young had similar ornaments before the whydahs developed into nest parasites, and that these similarities may have been perfected by selection.

It is to be hoped that aviculturists will keep Combassous together with Fire Finches and their allies and try to unravel some of the problems which the breeding of the Combassou presents. It should

be a fascinating task to make breeding experiments with this bird, and it would well repay aviculturists to study it.

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REARING THE HOODED MERGANSER

By S. DILLON RIPLEY (New Haven, Connecticut, U.S.A.)

The Hooded Merganser of North America, *Mergus cucullatus*, is one of the most beautiful of the waterfowl. The species has been recorded as an accidental visitor perhaps a half-dozen times from Western Europe and the British Isles. Only a little larger than the Smew, the adult male in breeding or winter plumage can be immediately recognized by the white breast with sickle-shaped black bar on the side (like a Wood Duck or Mandarin), the vermiculated brown flanks, the white on the scapulars and lesser wing-coverts, black back, and the striking white, black-edged fan-shaped crest which in life is often nervously raised and lowered like a signal flag.

The Hooded Merganser, unlike the Smew, had never been kept successfully in captivity until Mr. Charles A. Pilling, of Seattle, Washington, found a female, crippled during the autumn hunting season, in 1950. This bird, starting on natural food found in his ponds, soon settled down and finally started eating grain and pellets (compressed tablets of mash) like the other wildfowl.

In the spring of 1953 Mr. Pilling's female laid eggs and Mr. Pilling made every effort to secure a male. On Christmas Day in 1953 he brought home a male that had been shot in the hip and with a badly broken wing. By keeping him in a small wire cage, with

a bantam hen for company (they became friends in about a week). Mr. Pilling was able to keep the wild male alive and at last to make him tame. Eventually he was brought into the kitchen, still in his cage, and made friends with Mrs. Pilling, the four Pilling children, and the dog and family cat.

The bird was force fed on a mixture of one-third fresh fish, one-third dog food, and one-third meal containing wheat germ oil, brewer's yeast, and powdered skim milk, among other things. The forced feeding lasted ninety-four days before the drake began to eat by himself. He was bathed daily.

After he began to feed naturally he was given an airing on a small pond each day for a week, after which he gradually began to resume a more normal life. However, he still prefers to feed from the hand and soon taught the female to do so as well.

The spring of 1954 the male went into moult, perhaps due to his artificial environment during the winter. The female Hooded Merganser mated with a drake Wood Duck, laid, and the eggs were fertile but the young died in the shell just before hatching. Mr. Pilling reports that the young looked like young Wood Duck, but unfortunately none was preserved. The spring of 1955 the two Hooded Mergansers were segregated and the female laid ten eggs. The eggs took thirty and a half days to hatch, from 12 noon on 29th April to out of the shells on the morning of 29th May.

The surviving ducklings were force fed every hour during daylight for the first three days and every two hours for the next three days. The birds started eating mealworms on the fifth day. After dipping the mealworms in a mash the young soon started eating a mixture of egg, mash, and chopped lettuce. From then on they were fed stripped raw beef heart, but after two weeks they fed mostly on a regular commercial game bird mash. Mr. Pilling remarks that in fact the old birds as well as the young really prefer this feed, Purina "Game Bird Startina", to anything else, "except my wife's home-made stone-ground whole-wheat bread. They will drop everything for this, and so will I," he relates.

By mid-August Mr. Pilling had six young reared out of nine fertile eggs. At six months one of the young wrenched its neck in an aperture in the wire fence and subsequently died. The remaining five developed into two males and three females.

This spring, 1956, Mr. Pilling has hatched twelve young Hooded Mergansers so far, an avicultural triumph. Truly he is to be congratulated for the first keeping and rearing of these enchanting little ducks.

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HYLOCICHLID THRUSHES IN CAPTIVITY WITH NOTES ON THEIR BEHAVIOUR

By William C. Dilger
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There are five species of North American forest thrushes commonly assigned to the genus *Hylocichla*. They range in size from about that of a Nightingale to that of a Song Thrush. They are all brown above, pale below, and with dark spotting on the breast. All are true thrushes (not chats), and there is evidence that the Wood Thrush *H. mustelina*, the largest species, is not especially closely related to the others and may, in fact, be best considered in *Turdus* (Dilger, 1956*a*). The remaining four are closely related to the South and Central American Nightingale-Thrushes of the genus *Catharus* and are best considered congeneric with them (Dilger, ibid.).

With the exception of the Wood Thrush they are very similar in appearance and are moderately difficult to distinguish by sight in the field. Comparatively minor differences serve as distinguishing characters. The Veery or Wilson's Thrush, *Catharus fuscescens*, is a uniform tawny brown above and white below with a buffy wash on the breast which has a few indistinct spots. The Hermit Thrush, *C. guttatus*, is rather heavily spotted on the breast and with a reddish-brown tail which is characteristically raised and lowered. The Olive-backed Thrush, *C. ustulatus*, and the Grey-cheeked Thrush, *C. minimus*, are very similar in appearance but the former has a conspicuous buffy eye ring and cheeks whilst the latter has these areas decidedly greyish. The Wood Thrush, besides being the largest, is stockier in appearance with very extensive and very dark spotting on the underparts. The head is also more reddish than the rest of the dorsum.

The ranges of these species overlap extensively and in view of their similar appearances and similar ecological requirements questions arise concerning their reproductive and ecological isolating mechanisms. Unlike their appearances, their voices are quite dissimilar and investigations have shown that vocalizations provide the chief sign stimuli upon which correct mating choices depend (Dilger, 1956*b*). Rough segregation as to habitat and adaptive differences in limb and bill proportions correlated with different feeding niches provide ample ecological isolation (Dilger, 1956*c*).

A number of individuals representing these species were kept in captivity in conjunction with some of the investigations carried out on their hostile behaviour as this relates to their reproductive isolating mechanisms. All five have been in my possession at one time or another, but I can say this only as a technicality as I had but one Grey-cheeked Thrush and it, a wild-caught adult, died a few hours after capture !

All of the others, with the exception of one Wood Thrush, were obtained from the nest and hand-raised. These nestlings were easily reared on a diet of chopped earthworms with a gradually increasing proportion of canned dog food. It is usually difficult to get enough insects to feed normally insectivorous birds and this canned dog food proved to be a good substitute. Since all of these species consume quantities of small fruits these were frequently provided. Blueberries cherries, grapes, raspberries, blackberries, currants, and mulberries were readily available and eagerly consumed during the summer and autumn. Raisins, chopped apple, and other commercially available fruits were utilized during the winter. Dried raisins are eaten but the birds prefer them soaked. The Hermit Thrush which I have at present has learned to soak them in his water dish if they are proffered dried. This was learned by chance as he initially used to drop them in the water by accident and subsequently retrieved them well soaked. He now does this quite deliberately. The staple of canned dog food had some disadvantages. First, it spoils rapidly when not under refrigeration and hence a close watch must be kept on the amount on hand in the cages. Secondly, although the birds appeared in good condition their droppings were somewhat loose and of a brownish colour. A commercially prepared dry dog meal (Kasco) was next used. This, of course, does not spoil when dry but the droppings, though firmer, were still brownish. At present I am using Spratt's Mockingbird Food as a staple. This is given with a small admixture of grated carrot and hard boiled whole egg. My birds are thriving on this and their droppings are firm and sharply black and white. Small fruits are still given upon occasion and also mealworms and whatever other live food that comes to hand. They can handle small earthworms but large ones must be cut into pieces for them. These are taken with relish. Small strips of lean raw beef are also consumed eagerly. A vitamin supplement is given, especially in the winter. This has been a water soluble commercially available all-purpose vitamin mixture known as ABIDEC. Zymadrops would also be suitable.

The birds are housed in glass-fronted, half-inch hardware cloth-covered cages which measure 36 inches long by 20 inches deep by 20 inches high. Two are housed quite comfortably in such a cage and three seem not too many, but new combinations of individuals have to be watched carefully for several days in order to be sure that none is being persecuted by the others. Food and water are kept in finger bowls and the cage floors are covered with newspapers.

All are great bathers. Water in wide shallow pans is provided for this purpose every other day or so. Bathing behaviour is manifested as soon as the birds are old enough to leave the nest. The bathing motions are innate but the fact that they have to be performed in the water has to be learned. This has been borne out by observations

on the Wood Thrush, Veery, Hermit Thrush, Olive-backed Thrush, and the American Robin, *Turdus migratorius*. The first bathing motions are frequently carried out on the dry cage-bottom right after the bird has dipped its bill in the bathing pan. In these cases the bathing motions are as typical and intense as real bathing and are usually followed by the shaking and preening that occur after true bathing, which suggests that the entire sequence tends to be followed through once the performance is initiated. Adult birds occasionally perform this " dry bathing " if the bathing drive is high and the bathing pan is pre-empted by another bird. In these cases rather intense intention movements to bathe usually precede the actual bathing movements. In these cases, too, the bird typically performs the entire sequence including the drying and preening movements. It is ludicrous to see such a bird after " bathing " fly heavily, as if soaking wet, to a perch and commence the lengthy series of shakes and preens that normally follow a bath. This " dry bathing " has been reported for a number of species (see Morgan and Tyrrell in Armstrong, 1947, 120). This may be an example of vacuum activity or *leerlaufreaktion* as described by Lorenz (1937), in which a behavioural sequence is released by the presence of a normally inadequate (suboptimal) stimulus providing the internal drive for that particular behaviour is high enough. The Hermit Thrush which I have at present frequently exhibits this type of behaviour by " flycatching ". He will suddenly appear to be intently following some moving object in the air with his eyes, sally out, " capture " it with a loud bill snap and then return to the starting point where his " prey " is beaten on the perch for a moment before being obviously " swallowed ".

I have made some observations on the behaviour of my present Olive-backed Thrush before it fledged which may be of some interest. As is the case with other young birds with which I have had experience it would present a fæcal sac at each feeding. The actual feeding, however, is not necessary to stimulate this presentation as it would do so even if the food was accidentally dropped, or if feeding was merely pretended. Apparently just the stimulus of the presentation is enough to start the peristaltic wave along its large intestine which presumably causes the fæcal sac to travel to the cloaca. The hind portion of the body is sharply elevated before the fæcal sac appears and possibly pressure of the nest rim against the lower belly serves as a releaser for the actual expulsion of the sac, as this bird would scuttle rapidly backward until the cage wires came into contact with its rear and then the sac would be expelled, usually falling outside the cage. This behavioural pattern would be of considerable sanitary value in the wild in case the parent neglected to seize the proffered sac. The stubby tail is waggled vigorously from side to side immediately preceding the defecation. Unfortunately, I failed to keep similar records of my

other birds when they were young but my recollection is that a similar pattern was followed. The fledglings typically do not defecate during the night and the evacuation following the first feeding of the morning is unusually voluminous. When the young reach the stage of fledging the fæces are no longer presented in a sac and the " backing " behaviour abruptly disappeared at this time in the Olive-backed Thrush mentioned above.

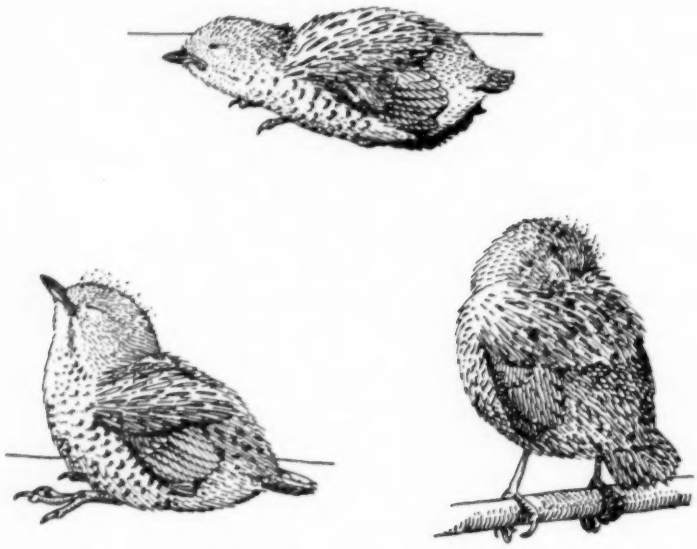

FIG. 1.—Sleeping postures (from a young Olive-backed Thrush). Upper : head extended ; lower left : head retracted ; lower right : adult position with bill and face under scapulars.

It was interesting to follow the ontogeny of the typical sleeping postures (Fig. 1). Up until about eight days old the young of all of these species sleep with their heads limply extended in front of them or over the backs of their siblings ; soon, however, they begin to sleep with the neck retracted and the bill pointing upward at an angle of about 45 degrees. The extended neck posture is seen less frequently until the birds finally sleep in the retracted posture only. At about ten days of age the head is sometimes turned over the shoulder and the bill and face thrust under the scapular feathers in the adult sleeping position. This gradually becomes the final sleeping posture adopted although adults sometimes doze during the day in the retracted posture. I could discover no preference in individual birds for either the right or left side when sleeping in the adult manner, but these species are difficult to surprise while asleep once they are fledged.

The bill and face are thrust under the scapulars, which are raised a bit, with a short, wriggling movement strongly reminiscent of the "tremble-shove" movement of nest-building birds working a twig into the nest.

Pellets composed of compacted indigestible remains of food are typically cast by all of these species much after the fashion of owls and hawks. Pellet casting in passerine birds has not received much attention in the literature (see Tucker, 1944). The size of the indigestible remains seem to have some bearing on whether they will be voided orally or in the fæces. Small seeds such as those found in raspberries or strawberries are voided with the fæces but larger items such as cherry stones are voided orally. The compacted larger fragments of insect chitin are voided orally but the tiny earthworm setæ and very small fragments of insect chitin are found in the fæces.

Sunbathing is done whenever the opportunity presents itself. Sunlight is not necessary to elicit the response but any warm, bright light source such as a desk lamp will do. The bird stiffly orients its body at right angles to the source of heat and light, fluffs out its feathers, usually spreads the uppermost wing or raises it, spreads the tail and then remains in this position for some minutes at a time. The eye nearest the light source remains wide open and the bill is typically held parted. These species begin this behaviour at an early age ; all of my birds doing it as soon as they fledged. Sunbathing often follows water bathing if the proper stimuli are present at the time. Heat seems to be a more important stimulus than light, although light must be present (they will not sunbathe to a hot iron nor to an ultra-violet lamp which gives off little heat). An infra-red lamp, however, stimulates a response quite readily.

My Olive-backed Thrush rather inexpertly captured crawling insects for the first time when it was eighteen days old and had been fledged for about four days. It would not pick up inert food material until it was twenty-four days old. From this day on it fed itself but would "beg" for food when approached for several days more. From the date of fledging flying insects caused this bird to follow them with an eye and to make intention movements to sally after them.

Young of these species when near fledging indulge in much preening, shaking, stretching, and other comfort movements. The rapidly feathering wings are often whirred rapidly, almost lifting the youngsters. In the nest the wings are most frequently stretched by bringing both over the back while partly folded. Later the commonest stretching movement is the usual stretching of a wing and a leg on the same side. A common movement seen in fledglings and younger birds is a thrusting upward and forward with the extended neck while the head is rapidly flirted in a rolling manner from side to side. This reminds me very strongly of the preliminary head shaking in Mallards.

I have not seen adults do it. The legs may be stretched simultaneously by the bird straightening both legs to their fullest extent while standing or perched. A typical full-stretching sequence in these forms is to first stretch both wings over the back, then stretch a wing and a leg on one side, followed by a similar movement on the other, and lastly stretching both legs at once as described above (Fig. 2). The jaws may be stretched and this is distinguished from the somewhat similar threat gaping by the context of the action and by the fact that the jaws

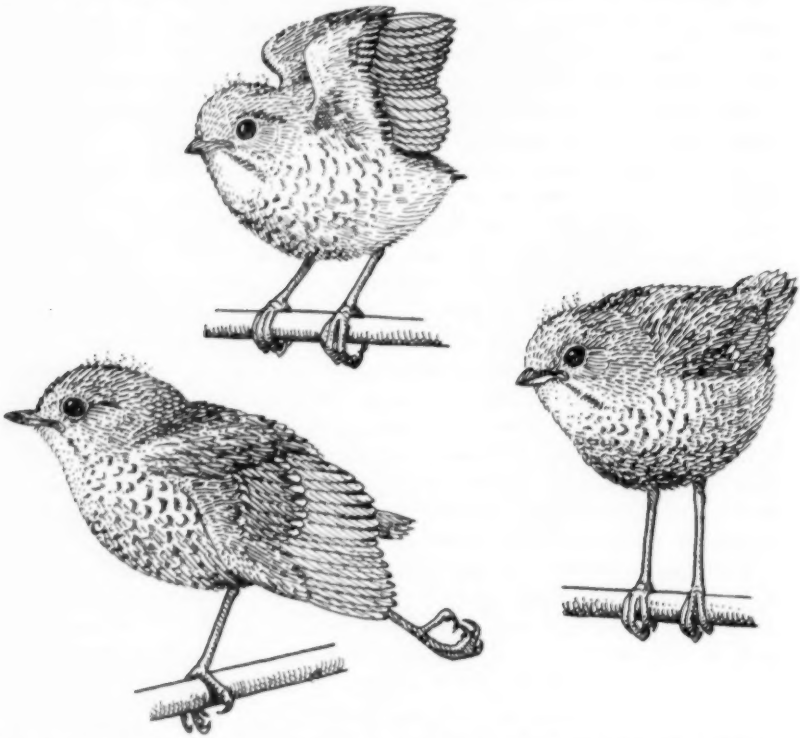

FIG. 2.—Stretching movements (from a young Olive-backed Thrush). Upper: both wings; lower left: left wing and leg; lower right: both legs.

are shut quickly in stretching. Bill wiping is done in the typical passerine fashion, first on one side and then on the other. If the bill is particularly dirty more than one wipe on the same side of the perch may be performed before changing over. Scratching the head with a foot is, of course, done in the usual over-the-wing fashion of passerines.

These are rather " volatile " birds in regard to overt expressions of minor fluctuations in the relative and actual strengths of the attack

and escape drives. These slight fluctuations are reflected in varying degrees of crest-raising (attack) and slimming of the plumage (escape) and are displayed almost constantly during their daily activities. The reddish crest of the Wood Thrush is a particularly sensitive " barometer " in this regard.

Fortunately, I have had little trouble with illness in my birds. Last fall, however, they all contracted some serious respiratory ailment and were literally at the point of death. I luckily hit upon a cure and all survived. In the United States and Canada, at least, various antibiotics for veterinary use may be bought without a doctor's prescription. There is a terramycin preparation available in collapsible metal tubes which have long nozzles and are designed for the treatment of mastitis in cows. In desperation I bought a tube of this material and gave each of my birds a squirt of terramycin orally. The long nozzle facilitates this and one only has to be careful to get the end of the nozzle beyond the glottis so as not to drown the patient. Recovery was amazingly rapid. All of the birds appeared perfectly normal three hours after treatment !

I plan to make more cages and perhaps an outdoor aviary to house more birds which will enable me to continue my behavioural observations on a larger scale. I hope to breed some of them. The Wood Thrush has been bred several times in captivity (e.g. Ivor, 1952), and the Hermit Thrush has been bred by Amsler, 1927.

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* * *

KEEPING WADERS IN CAPTIVITY

By A. F. Moody (Lilford, Northants, England)

Curlew (*Numenius arquata*).

Of all waders kept during half a century of bird-keeping few have appealed to me more or have been more interesting than the common Curlew; well-remembered objects of curiosity of my boyhood days when to see or hear an example on rare occasions passing high over the Yorkshire wolds was the sole extent of my acquaintance with this wild and wary species. Since then it was a red-letter day indeed first to visit their breeding ground upon the heather-clad moors; as was also the case when I first viewed them in numbers at their winter quarters in certain estuaries around our coast. Be these facts and reminiscences as they may, I have always in after years found a charm and pleasure in overcoming the extreme wildness and wariness of these graceful creatures and in having them around. Large and hardy enough to be almost cat- and rat-proof, they can be kept in walled-in gardens or in large enclosures where they show to the best advantage and find much of their own living. Ten or twelve years is no unusual period for an adult wild-caught Curlew to live in semi-captivity. During every moment of that time, be they standing sentinel-like with the various waterfowl, probing the soft earth with their long bill for earthworms, or adroitly capturing insects from the tall grasses with the same apparently unsuitable member, they are ever interesting, and their wild and weird cry renders them additionally attractive.

Food.—As to artificial food, newly caught Curlews when started in a small pen, take readily to fragments of fish, liver, or lean meat. They will also eat scalded biscuit meal or broken dog biscuit. This is a reserve food we get them on to by supplying in a shallow pan of water with the meat, etc. Once thoroughly on to artificial food they never forget it, and even when given access to several acres of ground will eventually, like domestic poultry, on being whistled come racing from a distance, morning and evening, to receive a few pieces of food thrown from the hand.

Hardiness.—As before stated, Curlews are comparatively hardy, but during deep snow or prolonged frost, it is kinder to confine them to a shed where unfrozen food and water can be kept before them.

Oystercatcher (*Hæmatopus ostralegus*).

Hardy and equally long-lived as the Curlew, we have found the Oystercatcher very adaptable to aviary or enclosure life. Ornamental and rather busy little birds, they are almost continually on the move, and seldom give way to larger species. With us they showed a

preference for running around the water's edge, frequently uttering their well-known metallic chip or call, or occasionally pushing their long red bill into some other bird's face.

They also, as might be expected, favoured bare, stony ground, and made their very slight rubbings or nests upon the gravelled walks, a circumstance which, owing to unavoidable disturbance, prevented any successful breeding.

Treatment and general requirements the same as the Curlew.

The young of both species I have reared from the egg.

LAPWING (*Vanellus vanellus*).

Another delightful wader is the common Lapwing. These do well in either a pool-aviary or open enclosure. Being smaller, however, than the species already mentioned, they require more careful protection from vermin. A walled-in garden suits them admirably. This brings to my mind my first and youthful attempt at this form of aviculture, which was to keep a pair of wing-clipped Lapwings in the well-fenced garden of my boyhood home. There I well recollect the pleasure which these graceful and beautiful birds gave to the inmates of the house as they watched them from the windows trotting about a moderate-sized lawn, or wading in a small pool.

* * *

DONCASTER ZOOLOGICAL GARDENS

By E. F. GILMOUR, Director (Doncaster, England)

Members of the Avicultural Society may be interested in this new project being developed in Doncaster in connection with the Museum and Art Gallery. Many Members may personally know Mr. A. H. White, formerly of the Parrot House at the London Zoo, who has joined the staff here as Head Keeper. Both Mr. White and myself will be glad to meet any members who may be passing through Doncaster and who have a little time to spare. The Zoo is open every day, but a telephone call or letter would be advisable regarding week-ends to ensure meeting any special officer.

Apart from numerous common birds, some recent additions to the bird collections are as follows :—

Chestnut-bellied Starling (*Spreo pulcher pulcher*), a female Abyssinian Ground Hornbill (*Bucorvus abyssinicus*), and the Green-billed Toucan (*Rhamphastos discolor*). Four Cactus Conures (*Aratinga cactorum cactorum*) and a further pair of Finsch's Conures (*Aratinga finschi*). A very nice pair of Illiger's Macaws (*Ara maracana*) have also arrived, as well as two young African Ringneck Parrakeets (*Psittacula krameri krameri*).

Among the Cockatoos recent arrivals have been the White-crested (*Kakatoe alba*) and the Bare-eyed Cockatoo (*K. sanguinea ashbyi*).

A White-fronted Amazon Parrot (*Amazona leucocephala*) is one of our most interesting arrivals in this group, apart from an Amazon Parrot which we have not so far been able conclusively to identify. This specimen came from Costa Rica, but does not agree with any traced records from that region. It is very like the common Yellow-fronted Amazon, but has a rather different distribution of the yellow and the yellow frontal feathers each have an orange base. It does not appear to be a very young bird, but we are waiting to see what develops after a moult.

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BREEDING THE LUTINO NYASALAND LOVEBIRD IN CALIFORNIA

By DAVID WEST (Montebello, California, U.S.A.)

This pretty mutation first appeared in Australia during the early 1930's and was eventually established in Australian aviaries. An importation of seven or eight Australian-bred lutino Nyasalands into England in 1937 did not prove successful. Apparently the birds were almost all hens, and rather shy breeders.

In 1940 a Mrs. Reed, of El Monte, California, reported rearing a lutino. What became of this bird I do not know, but lutino Nyasas did not reappear in California until the 1950's. At this time the Rudkins, Junior and Senior, had several young lutinos reared from green parents, but were unable to establish a strain.

This year I was very pleased to find, among a nest of greens, a lovely lutino youngster. They are very easy to spot, even at an early age, for their skin is very light and the ruby-coloured eye is easily seen. This particular nest contained four greens and the one lutino. The parents reared the five without trouble, and all left the nest in due time.

Lutinos appear a little slower to learn self-reliance than their normal-coloured brothers and sisters. However, within a few days the lutino was doing just as well as the others, and has continued to do so. It would be my guess that lutino Nyasas, like lutinos of other species, are a little more sensitive to the light than normals of the same species. They seem to take a while longer in learning to judge distances, etc., but once used to the aviary do very well.

The contrast between the pink head and the bright yellow body is very lovely, and the pink is repeated in the tail feathers. They are

quite striking birds, and certainly the equal in beauty to lutino Ringnecks.

Since most *Agapornis* have a tendency to overbreed, to try and circumvent this I usually take and destroy their old nest a few days after the family has flown. Then by giving them new nest-boxes and fresh building materials it will usually require them several weeks before a complete new nest has been built, and during this time the adults have had a short period of rest. The favourite building material seems to be palm fronds, which are easily obtained here in Southern California and have the added advantage of retaining moisture and thus helping to prevent the eggs from drying out.

I feed my Nyasas a mixture of canary, oats, sunflower, millet, and hemp. In addition, they like greens of all kinds, and mine will eat oranges, apples, and are very very fond of fresh corn on the cob. While they are rearing young I feed soaked bread, and they seem to like this very much while in the process of rearing young ones.

* * *

LONDON ZOO NOTES

By J. J. YEALLAND

Of the birds received during July and August, three are forms not previously exhibited. These are a pair of the Chinese Pied Woodpecker (*Dendrocopus major cabanisi*), a Chinese Rufous-backed Shrike (*Lanius schach*), and a Noisy Robin-Chat (*Cossypha bicolor*).

The Woodpeckers are, of course, a race of the familiar Greater-spotted or Pied which they very much resemble. The Shrike is a graceful and delicately tinted bird. These were presented, together with two Little Egrets, two young Indian Coucals, a second Chinese Koel and a Black-faced or Masked Jay-Thrush, by Dr. K. C. Searle. The Noisy Robin-Chat (deposited) was shown at the National Exhibition last January and, if I remember rightly, the year before.

A tame young Ground Hornbill or Brom-vogel (*Bucorvus leadbeateri*) was presented by Mr. Raymond Hook and Mr. John Seago ; an Aubry's Parrot, also known as the Gaboon Red-crowned or Red-fronted and the first to be exhibited here since many years ago, by Mrs. A. M. Stewart ; four of what appear to be the Eastern Pin-tailed Sandgrouse by H.E. the Mutasariff of Erbil ; four Ceylon Necklace Doves by Mr. Derek Goodwin ; two Diamond Doves by Mr. Astley Richards and three Golden-winged Sunbirds by Mr. J. R. Newmark.

A Blue Whistling Thrush, two South American Black Vultures, two Tri-coloured Herons, two Buff-backed Herons, two Little Blue Herons, two Venezuelan Wood Rails and two Sulphury Tyrants have been received in exchange.

Racquet-tailed Humming-birds (*Discosura longicauda*) are again in the Collection, the first since 1934 when five were received—two purchased and three presented by Capt. de Quincey. Four of these did not live long but the fifth lived for 2½ years when it died of senility.

Two King Penguin chicks have been hatched and the Gulls have bred well, four Greater Black-backed, two Lesser Black-backed, three Herring and one Silver being reared. A brood of Common Peafowl are now nearly half-grown and one of them is a Black-winged, a mutation unknown in the wild state. A pair of white Peafowl have a young family of four and there are a number of various young pheasants and some Upland and Egyptian goslings.

The Red-breasted Geese laid, but the eggs were infertile. Two Green-winged Kings have left the nest ; also two Cockatiels, some blue-bred Masked Lovebirds, a Swainson's × Red-collared Lorikeet, and two Crested Pigeons. A pair of Black Crakes at the Bird House nested and one chick hatched, but it did not survive.

The Long-tailed Parrakeets nested and four eggs were laid, but did not hatch. The hen has been here for nearly two years and the cock, a young bird not quite in full colour, for nearly a year.

The Satin Bower-birds built three nests, but no eggs were laid ; a young pair of the Gough Island Coots also got as far as building a nest.

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NEWS AND VIEWS

The Bronze Medal of the Avicultural Society of South Australia has been awarded to L. Ratzmer, for breeding the Turquoise Wren, *Malurus callainus*.

* * *

Vice-President Edward Boosey sends two items of interest. The first, that the old breeding pair of blue Ringnecks have reared a really splendid brood of five young ones which left the nest early in June. As two of last year's four young were disposed of there are now nine of these beautiful birds at Keston. The second item is that the Cuban Amazons have a brood—at the time of the report it was not possible to ascertain whether of two or three.

* * *

All too seldom is anything further heard of " first breeding " pairs. It is, therefore, all the more refreshing to hear of two such pairs that have been consistently successful in rearing broods. In 1949 E. N. T. Vane's Noble Macaws reared a nest of four and young have been bred almost annually since : The total reared must now be approaching thirty. This year four second and one third generation young were reared. Vane's Canary-winged Parrakeets reared four young in 1954, followed by nests of five both last year and the present.

Dr. Alan Lendon, North Adelaide, sends welcome news. He writes : " I have resumed aviculture to a minor degree ; largely at the instigation of my elder son. He does all the hard work and I look on ! " We now have pairs of Bourkes, Blue-wings, Elegants, Turquoisines and Splendids ready for the breeding season which is just upon us. Dr. Lendon goes on to say : " I have done quite a lot of field ornithology since I came home from England (nearly three years ago !) and have become much more familiar with many of our psittacines in the field. A few months ago, I was shown nineteen Orange-bellieds in the wild state about thirty miles from Melbourne. There were, until a few days ago, an aged pair still in our Zoo, but the cock has since died and the hen looks like following suit very shortly. I know of no others in captivity nowadays."

* * *

Reference to the early volumes of the AVICULTURAL MAGAZINE and *Bird Notes* shows that towards the end of the last century Madagascar Lovebirds were advertised at between 2*s*. 9*d*. and 3*s*. 6*d*. a pair. At the turn of the century the price rose slightly to 4*s*. 6*d*. and this was maintained up to about 1905 when it gradually dropped until, just prior to the Great War, they were offered at as low as 2*s*. 6*d*. a pair. Supplies then became short and after the war the price rose steadily until 1925 when the top price appears to have been 25*s*. Then followed regular importations and by the time of the imposition of the Parrot ban in 1930 the price had dropped to 10*s*. Thereafter there were, of course, no further importations and the species was gradually lost to British Aviculture. The Madagascar or Grey-headed Lovebird is virtually unknown to the present generation of aviculturists and is now regarded as a rare and very desirable species, as evidenced by the fact that recently a number of pairs were offered, and were not wanting in buyers, at £15–£18 a pair. The current price appears to be £10. And so, what was formerly regarded as the commonest of all psittacines is now considered quite a " collector's piece " !

* * *

Breeding reports : F. C. Astles, fourteen Mandarin Ducks and a clutch of Partridges. P. C. Bath, Leadbeater's Cockatoo, two young flying. Mrs. E. J. Birchall, three Quaker Parrakeets and three Golden-mantled Rosellas reared, otherwise a melancholy recital of clear eggs, young dead in shell and deserted chicks. A. Birtles, Gouldians have two young flying, these being fourth generation cage-bred ; also reared, Golden, Silver and Amherst Pheasants, two Carolina Ducks and two Bourke Parrakeets. F. J. Burt, Scaly Weavers filled a small box with moss and grass, leaving a tunnel to the back of the box where they made a round nest of feathers and hair ; the one egg was unfortunately infertile. R. S. de Q. Quincey, three Shamas flying. Sqd.-Ldr. A. Everitt, Black-crested Finch, nests of two and three reared, and one

young hatched in a third nest ; Cordon-bleu, two ; Zebra Finch, six chestnut-flanked white and several natural. A. H. Isenberg, California, one Regent Bird " four days off the nest ". R. G. Kirkham, Layard's Parrakeet, two young now flying ; Hooded Parrakeet, the eggs proved infertile. G. C. Lynch, one House Finch (*Carpodacus mexicanus frontalis*), possibly the first time the so-called " California Linnet " has been bred in Great Britain. C. M. Payne, Red-collared Lorikeet, a number of young hatched but the parents invariably neglect them when they are about three weeks old and, consequently, they die ; Oregon Towhee, reared young ; Rock Pebblers, Queen Alexandras and Pennants have reared young ; Yellow-backed Lories again had eggs. R. C. J. Sawyer, Yellow-winged Sugar Bird, two young hatched and fully reared : Roulroul, three eggs were broken before the hen finally settled down to incubate a clutch of five ; four young were hatched on 7th August and are now six weeks old. O. H. Young, eight Peach-faced Lovebirds.

* * *

Round the Zoos.

Chester.—At irregular intervals over a period of nearly two months an Emu laid about twenty eggs. Twelve were placed in an incubator and at the end of April eleven young hatched, most of which are thriving. Seven more eggs were then put in the incubator ; result not yet reported.

Moscow, U.S.S.R.—A Great Condor has been flourishing since 1892, sixty-four years.

New York.—The Bronx Zoo now possesses two Keas, acquired through the good offices of the Wellington Zoological Gardens, New Zealand. A previous favourite exhibit, known as " Old Shep ", lived in the Zoo for nearly twenty-nine years.

San Diego.—Birds listed as new to the collection are a Grey Plantain-eater and a pair of Giant Cassiques.

A. A. P.

* * *

CORRESPONDENCE

CROSS BETWEEN CANADA GANDER AND DOMESTIC CHINESE GOOSE

It may be of interest to record that I have successfully hatched two goslings which are a cross between a Canada gander and a domestic Chinese goose. They were hatched in an electric incubator, are nearly two weeks old, and doing very well (15th July, 1956). The Wildfowl Trust have no record of this particular cross and I am wondering if this is a first time ?

The history of the parent birds and some of the circumstances of the case are interesting.

A year ago a so-called " sportsman " shot a Canada goose on her nest by a Cheshire mere. On picking her up he found five newly hatched goslings. He took them home with the avowed intention of fattening them up for Christmas. Hearing of this some weeks later, I decided to save two of them from the pot and, hoping for a pair, acquired the largest and the smallest of the goslings. These were placed in my paddock with three rather older domestic Chinese goslings.

During last winter two of the Chinese fell victims to foxes and I was left with two Canadas and one Chinese.

Although the Canada geese appear to be a gander and a goose, and spend most of their time together, mating was seen to occur between the male Canada and the female Chinese. The female Canada, being immature, made no attempt to nest.

After several failures we finally succeeded in hatching the two goslings. In the down they are very similar to the illustrations of Canada goslings in *Waterfowl of the World*, and it will be interesting to see how they look when feathered.

UNDERCLIFF, 136 CHESTER ROAD, HELSBY, CHESHIRE. A. W. E. FLETCHER.

Note.—Regarding previous breedings, A. D. Barlett (*Proc. Zool. Soc. London*, 1847, p. 50) gives a list of the species of Waterfowl then known to have produced hybrids—he includes Canada Goose × Chinese Goose. In the *List of Vertebrated Animals* (1929, p. 452), published by the Zoological Society of London, there is a note under Chinese Goose : " Has interbred with the Canadian Goose (*Branta canadensis* × *Cynopsis cygnoides*), and produced offspring in 1927 and 1928 in Kensington Gardens, London."

A. A. P.

FOOD USED IN REARING PLUM-HEADED PARRAKEETS

Dr. S. B. Kendall writes of his difficulty in breeding Plum-heads but he does not say how the birds are fed. In India young Ring-necks are easily reared by hand on parched gram flour mixed with water into a paste, the well-known suttoo, but young Plum-heads are not reared on this almost universal food but on boiled rice. When I was stationed at Karwar I was given four young of the Malabar or Blue-winged Parrakeet which the boy who brought them had tried to rear on the usual suttoo. The birds appeared in a very bad way indeed and I doubted if I could rear any of them. But I fed them on ground rice and milk sweetened with gur or raw brown sugar made up, so far as I could, on the recipe given by Dr. Amsler in an article published many years ago on the rearing of Swainson's Lorikeets. I saved two of the nestlings, which grew up into lovely birds ; two of the young were too far gone to save. I have often watched wild Blossom-headed Parrakeets in Gujerat in India. They are very lovely things and far more fruit and bud eaters, at least so I have observed, than the more robust Ring-necks. I do not think it matters if the ground rice is sweetened with brown or white sugar. Indeed, I found in subsequent practice that white sugar made the ground rice less sticky and better to feed. The ground rice must, however, be made with milk into a stiff pudding, if I may so describe it. I believe the right name is rice mould.

GODFREY DAVIS.

BERESFORDS,
BOUGHTON MONCHELSEA,
NR. MAIDSTONE, KENT.

FIRST IMPORTATION OF DIGGLE'S FINCH (*Poephila atropygialis*)

We have recently received from Australia four pairs of Diggle's Finch (*Poephila atropygialis*) which is also known as the Black-tailed Finch and the Black-rumped Finch, and as far as we know has never before been imported into this country.

It is a near relative of the Parson Finch and the Long-tailed Grassfinch, resembling the former in shape but the latter as to its body colour. The Parson Finch is what I would describe as biscuit-brown with a grey head, whereas the Long-tailed Grassfinch is of a very pale café-au-lait colour with a light silvery-grey head. Diggle's Finch, on the other hand, is perhaps even lighter in colour than a Long-tailed, which makes its black markings stand out very strikingly. In other respects (including its black beak) it resembles a Parson Finch, except for its slightly larger size and the fact that, instead of having a black tail and white rump, both its tail and rump are black—so, although superficially alike, the two species are really quite distinct.

Diggle's Finch, under the name of the Black-tailed Finch, figures in Cayley's *What Bird is That?* but the coloured illustration of it is rather misleading as it makes it appear to be a slightly darker shade of brown than the Parson Finch, which is not correct. He gives its habitat as Northern Queensland only, and the distribution of the Parson Finch as Queensland and New South Wales.

This is the first time we have ever had this rare species of *Poephila* at Keston and we hope to breed from them.

EDWARD BOOSEY.

BRAMBLETYE,
KESTON,
KENT.

BREEDING OF THE SENEGAL FIRE-FINCH (*LAGONOSTICTA SENEGALA*) IN CAPTIVITY

In the interesting note by Mr. C. J. O. Harrison on Fire-Finches, I am surprised to read that the Common Fire-Finch—*Lagonosticta senegala*—was bred for the first time by the Rev. C. D. Farrar in 1898. As a matter of fact this very beautiful little bird was imported into Europe in the eighteenth century, and Vieillot was probably the first to breed it. In his famous book *Les Oiseaux chanteurs*, published in 1790 in Paris, he describes the display of the cock before the hen, the nest, the eggs, etc. He adds that the breeding season is during the winter months and that a high temperature is necessary to bring up the young. Many other bird-lovers have bred this bird in France and Germany before 1898. In my opinion it is the easiest to breed of all the Waxbills, and the most charming.

J.-DECOUX.

GÉRY,
AIXE-SUR-VIENNE,
HAUTE-VIENNE,
FRANCE.

* * *

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J. P. Williams, The Old Farm, Tunstead, Norwich, Norfolk. Proposed by Terry Jones.

NEW MEMBERS

The fifty-two Candidates for Election in the July-August, 1956, number of the Avicultural Magazine were duly elected members of the Society.

READMITTED

Eric C. Kinsey, P.O. Box 396, Fairfax, Marin County, Calif., U.S.A.
William J. Sheffler, 4731 Angeles Vista Boulevard, Los Angeles 43, Calif., U.S.A.

CHANGES OF STYLE

Comte Léon Lippens, Den Hul, 43 Boslaan, Knocke-Le Zoute, Belgium.
Sqd.-Ldr. K. C. Searle, to Dr. K. C. Searle, Windsor House, Victoria, Hong Kong.

CHANGES OF ADDRESS

R. M. Adamson, to c/o 18 Pembroke Street, Bedford.
R. T. Bloom, to The North of England Zoological Society, Chester.
Hylton H. Blythe, to " Bay View ", 7 Clievedon Road, Thorpe Bay, Essex.
J. E. Dexter, to Mansdale, Calvert Road, Dorking, Surrey.
James K. Guthrie, to 3150 Valencia Avenue, San Bernardino, Calif., U.S.A.
Rev. Neville Morton, to 38 Tempest Avenue, Darfield, nr. Barnsley, Yorks.
Dr. K. G. Rothwell, to 51 Lutterworth Road, Leicester.
S. E. Taylor, to c/o May, 95 Ty-glas Road, Llanishen, Cardiff.
F. R. Wait, to " Thorneycroft ", 17 Hillway, Woburn Sands, Bucks.
W. J. Wood, to 61 Milson Road, Cremorne, Sydney, N.S.W., Australia.

MEMBERS' ADVERTISEMENTS

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WANTED

Hen Crimson-winged Parrakeet.—P. C. Bath, College Farm, Roxton, Beds.

Offers for 12 Barbary Doves.—J. A. Luke, Bona Lodge, Aldourie, by Inverness.

Cock or hen true Red-faced Lovebirds, also Citron-crested Cockatoo. State ages if known.—Major J. M. Serjeantson, Yed Hill, Ringwood, Hants.

Edwards hen '55 or '56 bred ; Mikado Pheasants ; Ornamental Pheasant Society Journals, also Avicultural Magazines.—A. Birtles, 169 Royds Street, Rochdale.

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